THE CLAIMS

What is claimed is:

1. A method for providing access to a communications medium, the communications medium being suitable for allowing use of a plurality of Home Phoneline Network Association (HPNA) v2 frames, the method comprising steps of:

transmitting a sequence of blocking frames on the communications medium, each blocking frame having timing to allow an Inter-Frame Gap (IFG) having a duration that is not recognized by an HPNA v2 station (STA) as a duration defined by an HPNA v2 specification for an HPNA IFG;

transmitting a message from a Media Control Station (MC STA) to at least one selected non-Media Control Station (non-MC STA) when the blocking frames are transmitted; and

receiving a reply message to the transmitted message at the MC STA from a selected non-MC STA when the blocking frames are transmitted.

2. The method according to claim 1, wherein the duration of each IFG between blocking frames is less than about 17 μsec.

3. The method according to claim 1, wherein each blocking frame includes a Blocking Frame Type field.

4. The method according to claim 3, wherein information contained in the Blocking Frame Type field identifies a frame type that is known to a v2 STA.

5. The method according to claim 3, wherein information contained in the Blocking Frame Type field identifies a frame type that is unknown to a v2 STA.

6. The method according to claim 1, wherein each blocking frame is assigned a highest HPNA v2 priority available in an HPNA v2 frame.

7. The method according to claim 1, wherein each blocking frame includes a scrambler initialization field having a fixed length.

8. The method according to claim 1, wherein each blocking frame includes a scrambler initialization field having a variable length.

9. The method according to claim 1, wherein each blocking frame includes a payload encoding field.

10. The method according to claim 9, wherein each payload encoding field includes information that is known to a v2 STA.

11. The method according to claim 9, wherein each payload encoding field includes information that is unknown to a v2 STA.

12. A method for providing access to a communications medium, the communications medium being suitable for allowing use of a plurality of Home Phoneline Network Association (HPNA) v2 frames, each HPNA v2 frame being timed to allow a plurality of physical layer priority level slots, the method comprising steps of:

transmitting a sequence of blocking frames on the communications medium, each blocking frame having timing to allow an Inter-Frame Gap (IFG) having a duration that is not recognized by an HPNA v2 station (STA) as a duration defined by an HPNA v2 specification for an HPNA IFG;

transmitting a message from a Media Control Station (MC STA) to at least one selected non-Media Control Station (non-MC STA) when the blocking frames are transmitted, the transmitted message being transmitted with a highest physical layer priority level available in an HPNA v2 frame; and

receiving a reply message to the transmitted message at the MC STA from the selected non-MC STA when the blocking frames are transmitted.

13. The method according to claim 12, wherein the duration of each IFG between blocking frames is less than about 17 μsec.

14. The method according to claim 12, wherein each blocking frame includes a Blocking Frame Type field.

15. The method according to claim 14, wherein information contained in the Blocking Frame Type field identifies a frame type that is known to a v2 STA.

16. The method according to claim 14, wherein information contained in the Blocking Frame Type field identifies a frame type that is unknown to a v2 STA.

17. The method according to claim 12, wherein each blocking frame is assigned a highest HPNA v2 priority that is available in an HPNA v2 frame.

18. The method according to claim 12, wherein each blocking frame includes a scrambler initialization field having a fixed length.

19. The method according to claim 12, wherein each blocking frame includes a scrambler initialization field having a variable length.

20. The method according to claim 12, wherein each blocking frame includes a payload encoding field.

21. The method according to claim 20, wherein each payload encoding field includes information that is known to a v2 STA.

22. The method according to claim 21, wherein each payload encoding field includes information that is unknown to a v2 STA.

23. A communication network, comprising:

a communications medium that is suitable for allowing use of a plurality of Home Phoneline Network Association (HPNA) v2 frames; and

a communications signal in the communications medium having a sequence of blocking frames, each blocking frame having timing to allow an Inter-Frame Gap (IFG) having a duration that is not recognized by an HPNA v2 station (STA) as a duration defined by an HPNA v2 specification for an HPNA IFG; and

a Media Control Station (MC STA) transmitting a message to at least one selected non-Media Control Station (non-MC STA) during the blocking frames, and receiving a reply message in response to the transmitted message from the non-MC STA during the blocking frames.

24. The communications network according to claim 23, wherein the duration of each IFG between blocking frames is less than about 17 μsec.

25. The communications network according to claim 23, wherein each blocking frame includes a Blocking Frame Type field.

26. The communications network according to claim 23, wherein information contained in the Blocking Frame Type field identifies a frame type that is known to a v2 STA.

27. The communications network according to claim 24, wherein information contained in the Blocking Frame Type field identifies a frame type that is unknown to a v2 STA.

28. The communications network according to claim 23, wherein each blocking frame is assigned a highest HPNA priority available in an HPNA v2 frame.

29. The communications network according to claim 23, wherein each blocking frame includes a scrambler initialization field having a fixed length.

30. The communications network according to claim 23, wherein each blocking frame includes a scrambler initialization field having a variable length.

31. The communications network according to claim 23, wherein each blocking frame includes a payload encoding frame.

32. The communications network according to claim 31, wherein each payload encoding frame includes information that is known to a v2 STA.

33. The communications network according to claim 31, wherein each payload encoding frame includes information that is unknown to a v2 STA.

34. A communication network, comprising:

a communications medium that is suitable for allowing use of a plurality of Home Phoneline Network Association (HPNA) v2 frames, each HPNA v2 frame being timed to allow a plurality of physical layer priority level slots; and

a communications signal in the communications medium having a sequence of blocking frames, each blocking frame having timing to allow an Inter-Frame Gap (IFG) having a duration that is not recognized by an HPNA v2 station (STA) as a duration defined by an HPNA v2 specification for an HPNA IFG; and

a Media Control Station (MC STA) transmitting a message to at least one selected non-Media Control Station (non-MC STA), the transmitted message being transmitted with a highest physical layer priority level available in the HPNA v2 frame and during the blocking frames, the MC STA receiving a reply message in response to the transmitted message from the non-MC STA during the blocking frames.

35. The communications network according to claim 34, wherein the duration of each IFG between blocking frames is less than about 17 μsec.

36. The communications network according to claim 34, wherein each blocking frame includes a Blocking Frame Type field.

37. The communications network according to claim 34, wherein information contained in the Blocking Frame Type field identifies a frame type that is known to a v2 STA.

38. The communications network according to claim 34, wherein information contained in the Blocking Frame Type field identifies a frame type that is unknown to a v2 STA.

39. The communications network according to claim 34, wherein each blocking frame is assigned a highest HPNA priority that is available in an HPNA v2 frame..

40. The communications network according to claim 34, wherein each blocking frame includes a scrambler initialization field having a fixed length.

41. The communications network according to claim 34, wherein each blocking frame includes a scrambler initialization field having a variable length.

42. The communications network according to claim 34, wherein each blocking frame includes a payload encoding frame.

43. The communications network according to claim 42, wherein each payload encoding frame includes information that is known to a v2 STA.

44. The communications network according to claim 42, wherein each payload encoding frame includes information that is unknown to a v2 STA.

45. A Media Controller station (MC STA) for a communications network having a communications medium, the communications medium being suitable for allowing use of a plurality of Home Phoneline Network Association (HPNA) v2 frames, the MC STA comprising:

a QoS (Quality of Service) management entity (QME) receiving at least one end-to-end QoS message characterizing a user application, the at least one end-to-end QoS message including at least one QoS parameter set that is expressed at a layer that is higher

than the Media Access Control (MAC) sublayer of an HPNA v2 network and is to be passed down to the MAC sublayer of the MC STA for enabling QoS traffic transport of the application;

an admission control entity (ACE) performing a centralized admission control decision relating to the application based on the at least one end-to-end QoS message characterizing the application; and

the MC STA transmitting a communications signal in the communications medium having a sequence of blocking frames, each blocking frame having timing to allow an Inter-Frame Gap (IFG) having a duration that is not recognized by an HPNA v2 station (STA) as a duration defined by an HPNA v2 specification for an HPNA IFG, the MC STA further transmitting a message to at least one selected non-MC STA using the communications medium, the transmitted message being transmitted during the blocking frames, and the MC STA receiving a reply message in response to the transmitted message from a non-MC STA during the blocking frames.

46. The MC STA according to claim 45, wherein the duration of each IFG between blocking frames is less than about 17 μsec.

47. The MC STA according to claim 45, wherein each blocking frame includes a Blocking Frame Type field.

48. The MC STA according to claim 45, wherein information contained in the Blocking Frame Type field identifies a frame type that is known to a v2 STA.

49. The MC STA according to claim 45, wherein information contained in the Blocking Frame Type field identifies a frame type that is unknown to a v2 STA.

50. The MC STA according to claim 45, wherein each blocking frame is assigned a highest HPNA priority that is available in an HPNA v2 frame.

51. The MC STA according to claim 45, wherein each blocking frame includes a scrambler initialization field having a fixed length.

52. The MC STA according to claim 45, wherein each blocking frame includes a scrambler initialization field having a variable length.

53. The MC STA according to claim 45, wherein each blocking frame includes a payload encoding frame.

54. The MC STA according to claim 53, wherein each payload encoding frame includes information that is known to a v2 STA.

55. The MC STA according to claim 53, wherein each payload encoding frame includes information that is unknown to a v2 STA.

56. The MC STA according to claim 45, wherein each HPNA v2 frame is timed to allow a plurality of physical layer priority level slots, and

wherein the transmitted message is transmitted with a highest physical layer priority level available in the HPNA v2 frame and during the blocking frames.